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Spring 4-24-2013

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Recommended Citation

Hopkins, Halina, "A GIS Analysis of Environmental Justice in Lake and Porter Counties" (2013). *Symposium on Undergraduate Research and Creative Expression (SOURCE)*. 254.
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A GIS Analysis of Environmental Justice in Lake and Porter Counties

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Starting with the publication in 1987 of the United Church of Christ Racial Justice Commission Report "Toxic Wastes and Race in the United States," environmental justice research addresses the geospatial relation between environmental hazards and the social characteristics of the communities hosting toxic sites. Geographic Information Systems (GIS) allows environmental justice researchers to consider questions involving public policy, health effects, risk analysis, and more nuanced considerations of race, income, and injustice. This project is an analysis of environmental justice in two counties in northwest Indiana: Lake County, which contains the city of Gary; and Porter County, an adjacent county with no major cities. I investigated the relationship between environmental hazards and wealth in these two counties. I addressed this question by using GIS to map population block data from the 2010 U.S. Census (using housing values, median income, and county revenue as indicators of wealth) against the locations of toxic release facilities from the U.S. Environmental Protection Agency's Toxic Release Inventory (TRI). I developed a set of maps showing the spatial relationship between TRI density and economic status.

Information about the Author:

Halina Hopkins is a senior majoring in biology, environmental science, and humanities. This project was the culmination of her advanced GIS class. She became interested in environmental justice through a course on African-American literature, when she learned of a material-historicist precedent for negative relations between minorities and the physical environment. What she learned from this project has made her more attuned, as a teacher of science and English, to social relations with the environment.

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